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September 27, 1995

Office of the Secretary
Federal Communications Commission
1919 M Street, NW
Washington, DC 20554

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Subject: Comments in WT Docket 95-102.

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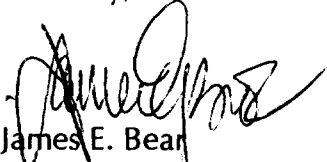
Dear Sir:

Enclosed you will find the Comments of REACT International, Inc. in response to the Commission's Notice of Proposed Rulemaking in WT Docket 95-102. Sufficient copies have been provided to allow for distribution of a personal copy to each of the Commissioners.

Please feel free to contact me at the above address/telephone number if I may be of any assistance in this matter.

Thank you.

Sincerely,


James E. Bear
Board of Directors
REACT International, Inc.

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Affiliated with: REACT International, Inc.

Founded 1962

An independent non-profit public service organization providing skilled volunteer two-way radio communications for safety.

- PUBLIC SERVICE through COMMUNICATIONS -



Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of)
)
Amendment of Part 95 of the Commission's Rules)
to Establish a very short distance two-way)
voice radio service)

WT Docket 95-102
RM-8499

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COMMENTS OF REACT INTERNATIONAL, INC.
to a
Notice of Proposed Rulemaking

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Dated: September 27, 1995

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EXECUTIVE SUMMARY

REACT International, Inc. (REACT) commends the Commission on allowing the continuation of frank, open and honest discussion regarding the need for additional, low cost, flexible, consumer grade radio communications alternatives. While the currently available services, including CB, GMRS, Cellular Radio Telephone, the Amateur Radio Service, and the (under development) Personal Communications Service (PCS) provide immediate and future alternatives for the family, they all fail to meet fully the needs of the consumer market. CB radio suffers from limitations resulting from use of technologies of the 1950's; the GMRS is not configured for easy use by the untrained family member; and cellular and PCS radio are priced as to discourage use by internal, family members.

While REACT feels that additional communication alternatives are required by families as well as public service organizations, the proposal as originally advanced by Tandy Corporation and outlined in this proceeding fails to address many, if not most, of the needs that can be identified. Therefore, REACT strongly urges the Commission to dismiss this Notice of Proposed Rule Making in WT-Docket No. 95-102, and to move forward in discussions with the various constituencies that require improved radio communication alternatives.

REACT, with its structure of membership representation on an assortment of Task Groups, including Communications and Government Relations, would be pleased to enter a constructive dialogue to identify the specific needs of the family and/or public service volunteer. Once these needs have been clearly identified, representatives of the manufacturing and retail sales sectors of the American economy, such as Tandy

Corporation, and its Radio Shack subsidiary, must be added to the discussion to determine how these needs can be met in a fashion that will serve the public's convenience and necessity and, at the same time, provide attractive consumer markets.

DISCUSSION

I. BACKGROUND OF REACT INTERNATIONAL, INC.

REACT International, Inc. (REACT) is a worldwide, member based organization of public service Teams serving their local communities. Its membership includes over 450 Teams and 6500 individuals. Over 190 REACT Teams hold GMRS licenses, and thousands of individual members hold personal licenses. "Radio Emergency Associated Communication Teams" serve their local communities in a broad array of programs, including:

- ♦ CB Channel 9 monitoring for providing emergency and motorist assistance to travelers.
- ♦ Working with local law enforcement agencies in community watch programs.
- ♦ Providing communications capabilities to disaster service organizations such as the American National Red Cross and the Salvation Army.
- ♦ Assisting with community events such as walk-a-thons, bike-a-thons, etc. to speed response of medical personnel and aiding with event administration.

REACT's mission of "Public Service through Communications" is filled through a mixture of radio services, including:

- ♦ The Citizens Band Radio Service (CB)
- ♦ The General Mobile Radio Service (GMRS)

- ♦ The Amateur Radio Service (ARS)
- ♦ Cellular Radio

Most REACT Teams and/or Team members are licensed to operate in more than one radio service, and many REACT Teams have membership active in all four of the cited services.

Our 1994 record of service was as follows:

♦ Total Hours Monitored to provide public assistance	2,560,461 +
♦ Total Hours Community Service	452,634 +
♦ Total Hours Training	45,416 +
♦ Disaster Assistance Hours	57,987 +
♦ Total Calls Taken	94,308 +
♦ Estimated Savings to Taxpayers	\$40,483,688 +
♦ Road Related Incidents Assisted:	
Accidents	30,798
Reckless/Impaired/DUI Drivers	8,790
Stalled/Disabled Vehicles	13,785
Traffic Hazards	5,217
Requests for Road Information	17,475
Vehicular Fires	1,038
♦ Other Incidents	
Boating Emergencies	153
Crime Activity	2,256

Floods/High Waters	681
Medical Emergencies	1,203
Missing Persons	324
Severe Weather	3,246
Non-Vehicle Fires	942
Relay of Personal Calls	497
Miscellaneous	3,903

REACT International, Inc. is a member of National Voluntary Organizations Active in Disaster (NVOAD), and maintains Memorandums of Understanding with the American National Red Cross, the Salvation Army and the National Weather Service.

Finally, REACT is cited by Tandy Corporation in RM-8499, its Petition for Rule Making, as one of the potential benefactors of the proposed Family Radio Service (FRS).

II. NEED FOR COMMUNICATIONS ALTERNATIVES

There exists today needs for additional and/or enhanced communications alternatives for the family and for public service volunteers. At this time there are four radio services available for use by the family and the public service volunteer:

- ♦ The Citizens Band Radio Service (CB)
- ♦ The General Mobile Radio Service (GMRS)
- ♦ The Amateur Radio Service (ARS)
- ♦ Cellular Radio

Each of these services can, and is, used by citizens seeking truly "personal" radio communications, such as for coordinating family activities and responding to the

increasingly complex demands on the American family of the 1990's. In addition, these services are used by citizens providing community service, on volunteer bases. However, the limitations inherent in each of these services serve to reduce the utility of any one.

For example:

- ♦ The Citizens Band Radio Service (CB) utilizes technology that dates back to the 1950's. While 40 years of research and development have made available such characteristics as improved clarity, selective calling, rule compliance through system design, and automatic trunking, *none* of these enhancements have been applied to the Citizens Band Radio Service.
- ♦ The General Mobile Radio Service (GMRS), given its current system design, limited number of available "channels", and requirement for active operator attention to assure rule compliance, is not capable, at this time, of handling an influx of thousands (millions?) of users that would result from implantation of Tandy's proposal.
- ♦ The Amateur Radio Service (ARS), with its requirement for operator licensing and intense operator attention to operating protocols, all but mandates that the user hold a high level of concern that can not be found in persons holding only a utility interest.
- ♦ Cellular Radio, while being one of the Commission's success stories for meeting a radio communication need, is still ill suited for meeting the radio needs of the family and the public service volunteer. Cellular radio's inherent integration with the public switched telephone network, and the resulting user economics, prevent

its use by the family member from finding another, for example, in a shopping mall, or by a local volunteer operating in a community watch program.

III. THE PROPOSED FAMILY RADIO SERVICE FAILS TO MEET THESE NEEDS

The proposal advanced by this proceeding fails to serve the communications needs it purports to meet. For example, many public service organizations have fled from the CB Radio Service simply because it is impossible to operate a town watch, provide radio communications in a disaster, or to call for emergency response personnel in a radio environment where great numbers of untrained operators seek to utilize a limited number of radio channels. It is precisely because of licensing requirements that the GMRS provides a more ordered environment that allows for community service. Elimination of licensing and allowing for a mass market appeal of GMRS equipment would render the service all but useless.

The proposal for a Family Radio Service will serve to heighten confusion in the GMRS regarding proper channel selection and use. In the early days of the Citizens Band Radio Service, the Commission's Rules reserved certain channel for intra-station communications, allowing inter-station communication on a subset of the 23 available. In addition, low powered, unlicensed "walkie-talkies" were allowed on some of the same radio frequencies. This experience proved totally unworkable in that operators routinely failed to comply with the stated requirements and the resulting chaos regarding selection and sharing of frequencies, and (mis)understanding of licensing requirements, contributed to failure of the service to meet its intended purposes.

The same type of requirements exist in the Maritime Radio Service, and, within the untrained pleasure boater community, the same confusion exists. We can apply this experience with the CBRS to the proposed FRS.

The Commission is proposing to recreate and relive these past experiences with the Citizens Band and Maritime Radio Services with the GMRS through implementation of the Family Radio Service. For example:

- ♦ It is unrealistic to think that an untrained operator who purchased a radio from a retail store will even *understand* the concept of secondary authority, much less comply with the stated requirements. Therefore, the Commission proposes a prescription for chaotic "sharing" of radio frequencies by individuals unprepared and/or included to do so.
- ♦ Radios, operating in an uncoordinated service, that allow muting of receivers and simultaneous operation of the transmitter is a prescription for interference, confusion and frustration.

In its Introduction, the Commission states that "selective calling would enhance the appeal of the FRS..." While true selective calling would enhance the convenience of use of the service, improper implementation could easily lead to even greater levels of chaos than already expected. For example, if the radios are capable of transmitting without first having to go to full carrier access (without the "convenience" of being able to operate the transmitter in a receiver muted mode) the user will likely attempt initiate contact without first determining if the channel is free of preexisting communications. While operation of radios with muted receivers is tolerable in coordinated radio services such as the Business

Radio Service, such operation routinely leads to user frustration and, at times, conflict in a service, including the GMRS, where operating standards mandate that users cooperate in the use and selection of frequencies.

The FRS proposal will also serve to intensify confusion regarding the sharing of the GMRS. For example, the GMRS, initially available for both personal and business licensees, experienced spectrum "range wars" when business users were forced to accept the presence of non-business, co-channel licenses, even though the rules clearly stated that no licensee had unique rights over others. Overlaying an FRS on the GMRS will only serve to blur these lines further, magnifying misunderstandings and causing the same user conflicts previously experienced in the GMRS and CB.

The proposal for a Family Radio Service fails to address the necessity for technology to replace the need for operators to assure rule compliance in any consumer grade radio service. Technologies such as Continuous Tone Controlled Squelch Systems (CTCSS) require a high level of operator training and attention to rule compliance. It is again unrealistic to think that a consumer, who just purchased two radios from a retail outlet, having received no training or operating experience, will even understand the concept of monitoring a channel "carrier access". much less make an effort to comply with the operating requirement. It is essential that a proposal for a consumer grade radio service, such as in Tandy's proposal, include sufficient technologies that assure rule compliance.

We were surprised that Tandy failed to make application of current technologies inherent in its proposal for an FRS. For example, Digital Signal Processing (DSP), selective

calling and trunking techniques are now commonplace in the radio communications field, and their application to an FRS-type proposal would serve well any proposal, in any spectrum. Many of these techniques would not only improve the utility of such a service, they would also advance, if not assure, rule compliance.

IV. ALTERNATIVES EXIST -- AND SHOULD BE EXPLORED

Many of the concepts advanced by this proposal contain merit, and should be implemented in a new, consumer grade radio service such as its proposed FRS. For example:

- ♦ The need exists for the general public to communicate in a diversity of everyday situations without incurring exorbitant per minute charges or monthly services fees.
- ♦ Parents will have an extra measure of security by using FRS to monitor their children at play.
- ♦ Families and friends will be able to maintain close contact...

However, in this NPRM the Commission fails to demonstrate a balanced understanding of the unique characteristics of the GMRS, given the limited channel authorization, spectrum allocation and modulation scheme of the Service.

It also appears that the Commission fails to understand the unique operating requirements experienced by citizens acting in volunteer capacities. While REACT Teams, town watch organizations and other public service volunteer groups require improved communication alternatives, a service such as proposed will meet few, if any, of these needs.

This is not to say that REACT disagrees with the idea of the FRS; on the contrary, REACT strongly agrees with the concept, and strongly urges the Commission to work with the representatives of the various user constituencies to identify mechanisms in future or *current radio services* to fill these needs. For example:

- ♦ Application of technologies such as Digital Signal Processing (DSP) and improved side-band techniques (such as Amplitude Compandored Single Sideband) to the CB Radio Service would go a long way toward reducing the major drawback of the service, the inherently poor signal quality.
- ♦ Adaptation of selective calling and/or trunking technologies to the CB Radio Service would eliminate a second major drawback -- having to listen to all the "garbage on the channel."
- ♦ Implementation of technologies to assure rules compliance, such as those that require monitoring of a channel carrier access prior to transmitting (or, better yet, equipment that prevents the operation of the transmitter when the receiver senses the presence of a signal) would greatly reduce the incidence of interference in any consumer radio service.

REACT agrees that the current schedule of GMRS regulatory and license processing fees are burdensome to the general public. The current fee structure will serve as an incentive to unlicensed operation. While REACT has long advocated retention of licensing, and reasonable license fees, in both the GMRS and the CBRS, we did so with the stated understanding that all fees be retained to fund service administration and enforcement. Rather than elimination of GMRS licenses, and licensing fees, REACT

would prefer a multi-tiered approach where operators pay a minimal regulatory and license fee (on the order of \$2 - \$5 per year, multiplied by the term of the license), with a second tier for repeaters (on the order of \$10 per year). This would serve to promote rule compliance, fund enforcement efforts, and help the user understand that the radio spectrum is a limited and unique national resource to be conserved and shared, not destroyed and wasted.

REACT thus urges the Commission to investigate all available alternatives, including enhancements to the CB Radio Service and GMRS that are long overdue, before taking specific action on the proposal advanced by Tandy.

We would like to advance one final operational alternative: If an FRS can be located in the radio spectrum near the frequencies of in development PCS, units could be designed that would allow operation in *both* services from a *single* unit. Thus, the user would have the capability to enjoy *both* the sophisticated alternatives available to PCS users and short distance, person to person communications in a single, person carried unit. This combination would go a long way to filling the needs of the mobile citizen while, at the same time, *eliminating the need to carry multiple radios!*


CONCLUSION

While REACT strongly supports the creation of additional communication alternatives for the general public, the Family Radio Service should not be implemented as proposed. A Family Radio Service, interlaced with the General Mobile Radio Service would suffer from channel congestion, interference, and customer dissatisfaction. In

addition, the utility of the GMRS for volunteer service organizations would be greatly diminished.

REACT strongly urges the Commission to study alternatives for meeting the communications needs of individual, families, and volunteers working in their communities. This study should include the review of the existing personal radio services (including CB) to determine what enhancements, in the form of improved technology, regulatory changes and operator education, can be implemented.

Respectfully submitted,


^ _____
James E. Bear
Board of Directors
REACT International, Inc.

September 27, 1995